



DEPARTMENT OF TRANSPORTATION
MATERIALS TRANSPORTATION BUREAU
WASHINGTON, D.C. 20590

80843

**Research and Special Programs
Administration**

49 CFR Part 172

[Docket No. HM-166F; Advance Notice]

**Limited Quantities of Radioactive
Materials**

AGENCY: Materials Transportation
Bureau, Research and Special Programs
Administration, DOT.

ACTION: Advance notice of proposed
rulemaking (ANPRM).

SUMMARY: This ANPRM provides
information and an opportunity for
comment on the need for, or possible
elimination of, certain regulatory
requirements applicable to the
transportation of radioactive materials
in limited quantities.

Comments must be received on or
March 13, 1981.

LESS COMMENTS TO: Dockets
Branch, Materials Transportation
Bureau, U.S. Department of
Transportation, Washington, D.C. 20590
(202-426-3148). Comments should
identify the docket and be submitted, if
possible, in five copies. The Dockets
Branch is located in Room 8426 of the
Nassif Building, 400 Seventh Street,
S.W., Washington, D.C. 20590. Office
hours are 8:30 a.m. to 5:00 p.m., Monday
thru Friday.

FOR FURTHER INFORMATION CONTACT:
Richard R. Rawl, Office of Hazardous
Materials Regulation, Materials
Transportation Bureau, Department of
Transportation, 400 Seventh Street,
S.W., Washington, D.C. 20590 (202-
426-2311).

SUPPLEMENTARY INFORMATION:

I. Background of Regulations

Ever since the general consolidation
of the Hazardous Materials Regulations
(HMR) was accomplished under Docket
HM-103/112 (41 FR 14972, April 15,
1976), an inconsistency has existed
between the regulations applicable to
aircraft and those applicable to the
other modes insofar as they pertain to
limited quantities of radioactive
materials and radioactive devices. As
that consolidation was a major revision
of the HMR wherein the requirements

for carriers by aircraft and vessel were
included in the comprehensive set of
regulations already applicable to
carriers by rail and public highway, it
was not possible to resolve all of the
philosophical differences represented by
the various modes. For the sake of
expediency, it was determined that the
general implementation of the
consolidated HMR should not be
unnecessarily delayed by varying
requirements which reflect the
legitimate differences professed by the
modal administrations regarding an
acceptable level of safety. A thoughtful
consideration of issues such as the topic
at hand was judged to be a more
prudent course and is expected to result
in regulations that assure a proper
degree of protection for public health
and safety without unduly burdening
shippers or carriers.

At the present time all packages
containing limited quantities of
radioactive materials or radioactive
devices transported by any mode are
excepted from specification packaging,
marking, and labeling, and are further
excepted from the provisions of
§ 173.393 pertaining to general
packaging and shipping requirements
applicable to other radioactive
materials. These exceptions are
consistent with those provided for
limited quantities of hazardous
materials belonging to most other
hazard classes based upon the limited
consequences that could be expected
when they are involved in incidents.
Hazard classes which do not provide
exceptions based upon a limited
quantity include those belonging to the
explosives group and poison A
materials. While the exception from
package marking does not apply to most
other hazard classes, it should be noted
that in the case of dispersible
radioactive materials the outside of the
inner container must bear the marking
"Radioactive."

Analysis of the limited quantity
exceptions for radioactive materials as
they apply to each of the modes reveals
the following differences in regulatory
control:

Rail: (a) A carrier may not accept for
transportation a package containing a
limited quantity of radioactive materials
unless it has received a properly

certified shipping paper (see § 174.24).

(b) A detailed hazardous materials
incident report must be filed with MTB
in the event of an unintentional release
or other reportable circumstance (see
§§ 171.15 and 171.16) and any
contamination resulting from a release
must be cleaned up (§ 174.750(a)).

Air: (a) Excepted from *all*
requirements of the HMR, including
shipping paper provisions and
hazardous materials incident reports
(see § 175.10(a)(6)).

Water: (a) Excepted from *none* of the
requirements of Part 176, and therefore
must have proper shipping papers (see
§ 176.24).

(b) A detailed hazardous materials
incident report must be filed with MTB
in the event of an unintentional release
or other reportable circumstance (see
§§ 171.15 and 171.16) and any
contamination resulting from a release
must be cleaned up (§ 176.710).

Highway: (a) A carrier may not
transport a package containing a limited
quantity of radioactive materials unless
it is accompanied by a properly
prepared shipping paper (see § 177.817).

(b) A detailed hazardous materials
incident report must be filed with MTB
in the event of an unintentional release
or other reportable circumstance (see
§§ 171.15 and 171.16) and any resulting
contamination must be cleaned up
(§ 177.861).

It can be seen that the span of control
over these materials ranges all the way
from being practically negligible when
transported by aircraft to very extensive
when transported by vessel. MTB
believes that the inherent risks
associated with the transportation of
these materials by each mode are not
sufficiently different to justify this
disparity. Consequently, this ANPRM
seeks public comment from shippers,
carriers, emergency response personnel
and other interested persons in helping
to resolve these differences, or
otherwise support their continued
existence based upon a technical review
of the regulations with consideration
given to the nature, form and quantities
of radioactive materials involved.

II. Current Regulatory Activities

• In Docket HM-169, Notice No. 79-1 (44 FR 1852, January 8, 1979) the MTB proposed a general revision of the HMR as they apply to radioactive materials to make them more compatible with international standards. Although a considerable amount of comment was received with respect to limited quantities, most of it addressed specific requirements such as the proposed elimination of the marking exception. Other commenters suggested that the all encompassing exception applicable to aircraft should be extended to the other modes. Although useful, the information in that Docket does not provide MTB with a complete set of data for use in making a thorough safety analysis for these materials by all modes.

On November 23, 1979, MTB published a notice of receipt of an application for exemption—8300-N (44 FR 67267). In this application United Parcel Service is seeking an exemption from the requirements for shipping papers when limited quantities of radioactive materials are to be transported by rail or over the public highways. Once again the MTB received public comment urging favorable action in this area but still it appears that even with the addition of these comments, and the data provided therein, the Bureau is not sufficiently informed to resolve the broader issues addressed in this inquiry.

In the area of international transportation regulations, the MTB is aware of current proposals to the "Technical Instructions for the Safe Transport of Dangerous Goods by Air" in which the International Civil Aviation Organization (ICAO) would treat limited quantities of radioactive materials as essentially unregulated commodities. To qualify for this exception the radioactive materials would have to meet a definition of limited quantity equivalent to one of those proposed in Docket HM-169, be packaged in accordance with general requirements applicable to all radioactive materials, and except for articles manufactured from natural or depleted uranium or natural thorium and empty packages, contain the marking 'Radioactive' so that it is visible upon opening the package. These materials could then be offered for transportation without an accompanying detailed shipping paper. Instead the shipper need only indicate the presence of these hazardous materials by entering a specified phrase—for example, "excepted radioactive material"—on whatever shipping document

accompanies the shipment. These proposals seem to evolve from present operating practices long since adopted by international air carriers with apparently no adverse impact on health or safety. To the extent that air carriers and certain international officials believe the public health and safety are adequately protected by these procedures considering the very small quantities of radioactive material involved, the MTB believes that it is worth investigating their applicability to other modes as well.

One of the functions a shipping paper provides is to make detailed information available to emergency response or cleanup personnel responding to an accident. In this regard, it has been alleged by some shippers and carriers that the information is not imperative due to the very small quantities of radioactive materials that may be shipped this way. Additionally, this detailed information is available or can be obtained from the consignor and the need to provide this information on the shipping papers has been questioned. Consequently, the MTB is interested in determining if the detailed description required by § 172.203 is necessary for adequate response to accidents, considering the limited hazard of these materials and other methods which are available for obtaining this information in a timely manner.

Another area for consideration is the marking requirements for these materials. There is an important interface between shipping papers and marking as they relate to:

- (a) recognition that a hazardous material is being shipped;
- (b) identification of the material being shipped;
- (c) proper handling and stowage of the materials involved; and
- (d) appropriate action in the event of an accident.

Therefore, the MTB is also seeking comments on how the marking requirements may need to be modified if the shipping paper requirements are changed.

III. Request for Comment

Comment is solicited on the preceding discussion and on the following questions. Do the requirements presently contained in the HMR, applicable to the transportation of limited quantities of radioactive materials, provide an appropriate degree of regulation to adequately protect the public health and safety?

(a) If so—

(1) How do the transportation conditions of the various modes differ to justify diversity of regulatory control?

(2) Can the exception from packing, marking requirements be supported to show that protection of the public health is not being jeopardized?

(3) In the case of intermodal transfers, do the more restrictive regulations impose an unwarranted economic burden without providing a commensurate increase in safety?

(4) Does the lack of an incident reporting requirement for limited quantities of radioactive materials transported by aircraft significantly diminish the effectiveness of the DOT's accident analysis system?

(b) If not—

(1) How should the regulations be revised?

(2) Do the hazards associated with all limited quantity radioactive materials and devices pose such a low risk that the MTB can remain confident in this exception, or should certain radionuclides, forms, etc. be excluded from limited quantity exceptions?

(3) What would be the approximate cost/benefit of any suggested change?

(4) Will there be an adverse impact on emergency response activities if detailed shipping paper requirements are waived for rail, water, and highway shipments of limited quantities?

(5) Do the marking requirements need to be modified if the detailed shipping paper requirement is waived for rail, water and highway shipments? If so, how?

(49 U.S.C. 1803, 1804, 1808; 49 CFR 1.53, App. A to Part 1, and paragraph (a)(4) of App. A to Part 106)

Note.—The Materials Transportation Bureau has determined that this document will not result in a major economic impact under the terms of Executive Order 12221 and DOT implementing procedures (44 FR 11034) nor require an environmental impact statement under the National Environmental Policy Act (49 U.S.C. 4321 et. seq.). A regulatory evaluation is available for review in the docket.

Issued in Washington, D.C., on November 28, 1980.

Alan I. Roberts,

Associate Director for Hazardous Materials Regulation, Materials Transportation Bureau.

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